

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

REMARKS

Applicants hereby add new claims 79-87. Accordingly, claims 14-20 and 35-87 are pending in the present application.

Claims 14-20, 35-42, and 45-46 are rejected under the judicially created doctrine of obviousness-type double patenting. Claims 14, 35, 42, 44-45, 47-48, 53-54, 57-60, 62-63, 65-67, 69-71, and 73-74 are rejected under the judicially created doctrine of obviousness-type double patenting. Claims 49-52, 55-56, 61, 64, 68, and 72 stand rejected under 35 USC 112, first paragraph. Claims 14-20, 35-43, 45-46, 54-55, and 75-78 stand rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent No. 5,355,519 to Hasegawa in view of U.S. Patent No. 4,075,632 to Baldwin.

Applicants respectfully traverse the rejections and urge allowance of the present application.

Referring to the 112, first paragraph rejections, the Examiner withdrew the 112, first paragraph rejections during the interview except for claims 49, 52, 56, 61, 64, and 68. Applicants respectfully submit the claims are in compliance with 112, first paragraph for at least the following reasons.

Referring to the rejections of claims 49, 56, and 64, the originally filed specification supports matching the amplitudes of the claimed signals and selecting the phase angle responsive to the matching. For example, as set forth in the example at page 25, lines 14+ of the specification, the measured amplitude values of the local continuous wave signal provided by coupler 91 in the example embodiment of Fig. 7

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

and the modulated continuous wave signal received by antenna R1 are applied to amplitude adjuster 110 of Figs. 7 and 8. At page 21, lines 15+ it is stated that coupler 91 provides a local continuous wave signal and page 24, lines 12+ provides that variable attenuator outputs an amplitude adjusted local continuous wave signal. The specification provides that the amplitude adjuster 110 is configured to drive variable attenuator 105 to equalize the amplitudes of the adjusted continuous wave signal and the modulated continuous wave signal. Amplitude adjuster compares the amplitudes and outputs a control signal to variable attenuator 105 to match the amplitudes of the respective signals.

As set forth at page 26, lines 14+ and the teachings of the exemplary embodiment of Fig. 7 of the originally-filed application, once the amplitudes of the signals are matched, the amplitude adjuster 110 indicates the match to phase adjuster 121 which thereafter selects an appropriate phase shift of the amplitude adjusted local continuous wave signal. Applicants respectfully submit at least these identified teachings support and describe the limitations of claims 49, 56, and 64 to one of ordinary skill in the art and the rejection of the claims is improper. Applicants respectfully request withdrawal of the 112, first paragraph rejection in the next Action.

Referring to the rejection of claims 52, 61 and 68 under 112, first paragraph, Applicants submit herewith a dictionary definition of "continuous wave" as used in the specification and defines a signal having a constant frequency. This definition of continuous wave supports the claim limitations of the local continuous wave signal

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

and/or radio frequency continuous wave signal individually comprising a single constant frequency as defined in claims 52, 61 and 68. Applicants respectfully request withdrawal of the 112, first paragraph rejection of claims 52, 61 and 68 for at least this reason.

It is to be understood that any described structural arrangements, methodologies and associated remarks with respect to the 112 rejections are only for purposes of illustrating that the above-identified terms are supported by the original specification and are not to be considered limiting to the respective claims. Other additional structural arrangements and methodologies are possible and encompassed by the claims.

Referring to the 103 rejections, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., MPEP §2143 (8th ed., rev. 2).

Referring to the rejection of claim 14, the Office on page 5 of the Action relies upon the teachings of Hasegawa and Baldwin in support of the rejection of the claims. However, the Office fails to identify teachings which allegedly correspond to positively-recited limitations of the pending claims. If any claims are not allowed, and in

Appl. No. 10/633,205

Amdt. dated July 11, 2005

Office Action mailed March 10, 2005

accordance with the CFR, Applicants respectfully request the issuance of a **non-final Action** to positively identify by reference number, figures, and column and line numbers of the prior art teachings relied upon by the Office so Applicants may appropriately respond during the prosecution of the present application.

More specifically, in the event that a rejection of the claims is maintained with respect to the prior art, or a new rejection made, Applicants respectfully request identification *in a non-final action* of elements which allegedly correspond to limitations of the claims in accordance with 37 C.F.R §1.104(c)(2). In particular, 37 C.F.R §1.104(c)(2) provides that *the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified*. Further, 37 C.F.R. §1.104(c)(2) states that the Examiner must cite the best references at their command. *When a reference is complex or shows or describes inventions other than that claimed by Applicants, the particular teachings relied upon must be designated as nearly as practicable*. Applicants respectfully request clarification of the rejections with respect to specific references and specific reference teachings therein pursuant to 37 C.F.R. §1.104(c)(2) in a **non-final Action** if any claims are not found to be allowable.

In particular, Applicants respectfully request identification of teachings which allegedly disclose the following limitations of claim 14:

a **receiver** configured to receive a **local continuous wave signal and modulated radio frequency continuous wave signal**; and

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

the receiver including a phase shifter configured to *adjust a phase angle of the local continuous wave signal* and the phase shifter including a first power divider, plural mixers and a second power divider;

the second power divider providing an *adjusted continuous wave signal*,
a coupler configured to *combine the adjusted continuous wave signal and modulated radio frequency continuous wave signal*.

Applicants respectfully submit the interrogator of claim 14 including the above-recited limitations are not disclosed nor suggested by the prior art and accordingly the Office has failed to establish a proper prima facie rejection for at least this reason. The Office on page 7 states that the difference between the claims and Hasegawa is the use of the phase shifter in an interrogation system. Applicants disagree and respectfully assert the above-recited limitations are absent from the prior art as evidenced by the Office's failure to identify any teachings of the prior art as allegedly disclosing the above-recited limitations. In addition, Applicants have searched and failed to uncover any continuous wave teachings in Hasegawa. The above-recited limitations of claim 14 are not disclosed nor suggested by the prior art and claim 14 is allowable for at least this reason.

Pursuant to the above CFR authority and if claim 14 is not allowed, Applicants request identification of reference teachings which allegedly disclose at least the above-recited limitations in a *non-final Action* so Applicants can respond during the prosecution of this application.

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

Also, Applicants again assert for at least the numerous reasons presented in the previous responses there is no motivation to combine the prior art teachings and the 103 rejection of claim 14 is improper for this additional reason.

In the event that any of the claims are rejected over the combination of Hasegawa and Baldwin, Applicants respectfully request **objective evidence** of the "known advantages" relied upon by the Office at page 5 of the Office Action to support the combination of reference teachings. The Federal Circuit discussed proper motivation *In re Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002) and stated motivation must be based **on objective evidence of record** and motivation **can not be resolved on subjective belief and unknown authority. The Court also stated that deficiencies of cited references cannot be remedied by general conclusions about what is basic knowledge or common sense but must be based on evidence.** There is no evidence of record to support the alleged "known advantages." Further, the statements regarding cost and accuracy on page 7 of the Action are further not supported by any evidence of record and accordingly are deficient with respect to motivation as held by the applicable authority of the Federal Circuit.

In addition, Applicant notes that claim 14 recites the **receiver includes a phase shifter configured to adjust a phase angle of a local continuous wave signal received by receiver.** Any alleged advantages of phase modulation over amplitude modulation for transmission are irrelevant to the claimed adjustment of the phase angle of the local continuous wave signal received by the receiver as positively recited in claim 14.

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2005

Regarding the alleged admission on page 7 of the Action, Applicants disagree and there is no admission of anticipation, obviousness or any other rejection under section 103 on the part of Applicants. In view of the positively recited limitations of the claims absent from the teachings of the prior art, Applicants submit the claims are allowable. The Office has misconstrued the argument which states that one would not modify the teachings of Hasegawa with the teachings of Baldwin when Hasegawa already provides teachings for which Baldwin is presented. There is no evidence of record to support the combination of teachings or that any improvement would be obtained by the combination. The prior art fails to teach the limitations of the pending claims at least as evidenced by the continued failure of the Office to identify any teachings which allegedly disclose or suggest the positively claimed limitations of the claims contrary to the CFR.

Applicants again submit for the above-identified reasons and other reasons cited in previous responses, there is no motivation to combine the reference teachings and the 103 rejection of claim 14 over Hasegawa and Baldwin is improper for at least this additional reason.

The claims which depend from independent claim 14 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Appl. No. 10/633,205
Amdt. dated July 11, 2005
Office Action mailed March 10, 2006

Referring to claim 35, the Office has failed to identify any teachings of the prior art which allegedly disclose the limitations of claim 35 and Applicants again respectfully request the identification of specific reference teachings in a *non-final* Action which allegedly disclose the limitations of claim 35 in accordance with the CFR if claim 35 is not allowed in the next Action.

Applicants have failed to identify any teachings in Hasegawa or Baldwin taken individually or in combination of the claimed *outputting the radio frequency continuous wave signal*, the providing the *local continuous wave signal*, the receiving the *modulated continuous wave signal*, or the adjusting to provide the *adjusted continuous wave signal*. Applicants have failed to uncover any teachings which allegedly disclose *combining the adjusted continuous wave signal and the modulated continuous wave signal* as claimed. At least these numerous positively recited limitations of the claims are not disclosed nor suggested by the prior art and claim 35 is allowable for at least this reason. Applicants respectfully request the submission of a non-final Action which identifies teachings of at least the above-recited limitations if claim 35 is not allowed so Applicants may appropriately respond during the prosecution of the present application.

There is no motivation to combine the teachings of Baldwin with Hasegawa, the Office has failed to establish a proper prima facie rejection for this additional reason, and claim 35 is allowable.

The claims which depend from independent claim 35 are in condition for allowance for the reasons discussed above with respect to the independent claim as

Serial No.: 10/633,205
Amdt. Dated 11/16/2004
Response to Office Action mailed: 7/16/2003

well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to the rejection of claim 54, the Office has failed to identify any teachings of the prior art which allegedly disclose the limitations of claim 54 and Applicants again request the identification of specific reference teachings in a *non-Final Action* which allegedly disclose the limitations of claim 54 in accordance with the CFR if claim 54 is not allowed in the next Action.

Applicants have failed to identify any teachings in Hasegawa or Baldwin taken individually or in combination of the claimed outputting of the RF interrogation signal, providing a *local signal corresponding to the interrogation signal*, receiving a modulated signal, *selecting one of a plurality of phase shift angles responsive to the received modulated signal*, *shifting a phase of the local signal* or the combining the phase shifted local signal and the modulated signal. At least these numerous positively recited limitations of the claims are not disclosed nor suggested by the prior art and claim 54 is allowable for at least this reason. Applicants respectfully request the submission of a non-final Action which identifies teachings of at least the above-recited limitations if claim 54 is not allowed so Applicants may appropriately respond during the prosecution of the present application.

There is no motivation to combine the teachings of Baldwin with Hasegawa, the Office has failed to establish a proper prima facie rejection for this additional reason, and claim 54 is allowable.

The claims which depend from independent claim 54 are in condition for allowance for the reasons discussed above with respect to the independent claim as

Serial No.: 10/633,205
Amdt. Dated 11/16/2004
Response to Office Action mailed: 7/16/2003

well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to the rejection of claim 75, the Office has failed to identify any teachings of the prior art which allegedly disclose the limitations of claim 75 and Applicants again request the identification of specific reference teachings in a *non-Final Action* which allegedly disclose the limitations of claim 75 in accordance with the CFR if claim 75 is not allowed in the next Action.

Applicants have failed to identify any teachings in Hasegawa or Baldwin taken individually or in combination of the claimed outputting of the RF interrogation signal, providing a *local signal corresponding to the interrogation signal*, receiving a modulated signal, *selecting one of a plurality of phase shift angles responsive to the received modulated signal*, *shifting a phase of the local signal* or the *combining the phase shifted local signal and the modulated signal*. At least these numerous positively recited limitations of the claims are not disclosed nor suggested by the prior art and claim 75 is allowable for at least this reason. Applicants respectfully request the submission of a non-final Action which identifies teachings of at least the above-recited limitations if claim 75 is not allowed so Applicants may appropriately respond during the prosecution of the present application.

There is no motivation to combine the teachings of Baldwin with Hasegawa, the Office has failed to establish a proper prima facie rejection for this additional reason, and claim 75 is allowable.

The claims which depend from independent claim 75 are in condition for allowance for the reasons discussed above with respect to the independent claim as

Serial No.: 10/633,205
Amdt. Dated 11/16/2004
Response to Office Action mailed: 7/16/2003

well as for their own respective features which are neither shown nor suggested by the cited art.


Applicants hereby add new claims 79-87 which are supported at least by Figs. 6 and 7 and the associated teachings of the specification.

Applicants request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 7/11/05

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